



Tree Conservation Report

2720 Richmond Road

Prepared for:

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1.0 OVERVIEW

This Tree Conservation Report has been prepared for A-Dn Architecture Design inc. (1-866-966-1940) in support of Site Plan Application to permit the development of the 2720 Richmond Road, Ottawa, Ontario. The site will be the new home of the Centre multiservices francophone de l'Ouest d'Ottawa currently located at 373 Poulin Street, Ottawa, Ontario, K2B 5V2 (613-797-9458).

The 2.3 hectares property at 2720 Richmond Road, east of Pinecrest Road, consists of one parcel of land currently developed with an existing heritage building complete with asphalt parking areas and landscaping. The site is described legally as Part of Lot 21, Concession 2 (Ottawa Front), Geographic Township of Nepean, now in the City of Ottawa. The site is designated General Urban Area in the City of Ottawa Official Plan and designated Minor Institutional Subzone A (I1A) in the 2008 City of Ottawa Comprehensive Zoning By-law.

This Tree Conservation Report will summarize the condition of the current vegetation and define which trees will be impacted by the development of this project. The construction of this project is planned to happen in 2013, construction starting early 2013 and ending in the fall of 2013.

2.0 INTRODUCTION

A tree inventory was conducted on July 11, 2012 to review the species and basic conditions of the trees located at 2720 Richmond Road in Ottawa. This inventory and analysis was a visual inspection of the tree species and their condition. This Tree Conservation Report outlines the condition of all existing vegetation on site, the impact of development on the vegetation and the mitigation measures used to preserve and minimize impact on the conserved vegetation.

2.1. Definitions

Some of the basic terms used within this document and on the plans have been defined below. Potential protection techniques and remediation measures have been noted.

| | |
|----------------------------------|---|
| Critical Root Zone (CRZ): | Zone under a tree where there should be no disturbance before, during and after construction. The CRZ is established as being 10 centimetres from the trunk of a tree for every centimetre of trunk diameter. |
| Diameter at Breast Height (DBH): | Diameter of a tree trunk measured at 1.4 metre above ground, standardized by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture. |
| Dieback: | Condition in which the ends of the branches are dying. |
| Drip Line: | Perimeter of the area under a tree delineated by the crown. |
| Leader: | The primary terminal shoot or trunk of a tree. |
| Scaffold Branches: | The permanent or structural branches of a tree. |
| Stress: | Any factor that negatively affects the health of a tree. |
| Structural Defect: | Flaws, decay, or other faults in the trunk, branches, or root collar of a tree, which may lead to failure. |
| Topping (Topped): | Cutting back a tree to buds, stubs, or laterals not large enough to become a new leader on the tree. |
| Tree Protection Zone (TPZ): | The area surrounding a tree that is marked and fenced off and where there is no storage of materials of any kind, no parking or moving of vehicles, and no disturbance of the soil or grade. |

- Tree Shoots: Tree shoots are sprouts that emerge from dormant buds along the trunk or branch of a tree. In an urban environment shoots are often associated with stress to the tree. Trees with severe dieback due to winter injury, drought and salt spray often produce many shoots as a means of compensating for the loss of leaf surface due to stress or injury.
- Tree Suckers: Tree suckers are sprouts that form from the roots of existing trees and tend to form new trees or shrubs. In an urban environment suckers can be associated with stress to the tree and are prevalent after a disturbance such as when mature trees are cut down. Some tree species have the tendency to sucker.
- Vigour: Overall health; capacity to grow and resist stress.

3.0 CURRENT VEGETATION

The inventory and analysis of the trees was completed on a visual basis only. The species were determined based on leaf, bark and buds identification. The vigour was assessed based on visible defects only.

3.1. Methodology and Observations

A complete assessment of every tree located on the property was completed. Information regarding trees growing on the property line or on adjacent properties was completed on a visual basis only due to the large number of individual small trees (15 centimetres in diameter or less) or because it was impossible to access the trees located on adjacent lots. The complete list of all trees located on or adjacent to the property can be found in **Appendix A – Tree Survey**. The Tree Survey is to be read in conjunction with the **Current Vegetation Plan (TC-1)** accompanying this report.

The approximate Diameters at Breast Height (DBH) noted on the Current Vegetation Plan and in this report were measured on site during the tree inventory site visit. A total of 119 trees were assessed for their DBH. In addition the Tree Survey also indicate DBH and / or information for planting beds of tree whips, shrubs and perennials and for trees located on the property line or on adjacent lots. In general the trees located on this property are primarily a mix of deciduous and coniferous species including Sugar Maple (*Acer saccharum*), Red Ash (*Fraxinus americana*), Honeylocust (*Gleditsia triacanthos*), White Spruce (*Picea glauca*) and Eastern White Cedar (*Thuja occidentalis*). Except for the trees located on the property line, the trees growing on this site have an average DBH of 30 centimetres to 60 centimetres with specimen trees having a DBH of approximately 100 centimetres.

3.2 Environmental Value of the Trees and Their Ecological Function

In addition to the species noted above, two (2) Butternut trees (*Juglans cinerea*) were found on the property near the walkway connecting to Rob Roy Avenue. The location of these two trees is shown on the Current Vegetation Plan. The Butternut tree is considered to be a tree species at risk being categorized as Endangered Provincially and Nationally and should be protected. A Butternut assessor also visited the site on July 31, 2012 and declared both trees are retainable trees. No other tree species on site are considered to be species at risk. All efforts should be made to protect and preserve the significant trees located on site during construction if they fit in with the proposed development. For aesthetic reasons and to provide a more mature character to the new development it is recommended to preserve a large number of trees.

The trees located in the front lawn facing Richmond Road are categorized as being “integral to the heritage character of the site”. These trees are high quality specimen trees adding to the heritage character of the existing building. Except for tree number 9 (Little-leaf Linden / *Tilia cordata* – refer to the Current Vegetation Plan) which is in poor condition due to a missing leader and significant number of suckers growing at the base of the tree all the trees in this area should be preserved.

Factors influencing preservation will be the amount of grading required at the base of the trees and the proximity of access roads, concrete curbs, servicing and/or built structures. Care will have to be taken to reduce the impact of construction on any trees that are to be preserved. Most of the construction impacts for this project will be in the form of new hard surfaces and the grade changes impacts on the roots of the trees.

4.0 PROPOSED DEVELOPMENT AND CONSERVED VEGETATION

The project for 2720 Richmond Road involves the demolition of an existing building located near Rob Roy Avenue and the construction of a new addition with associated asphalt drive aisles, parking and landscaping areas. The proposed development shown on the **Proposed Development and Conserved Vegetation Plan (TC-2)** indicates the location of the proposed addition and affiliated infrastructures.

4.1 Impacted Vegetation

Existing trees will be impacted by the development of this site. The complete list of all trees to be removed due to construction of the new addition, asphalt drive aisles or parking areas can be found in Appendix A – Tree Survey. The Tree Survey is to be read in conjunction with the Proposed Development and Conserved Vegetation Plan (TC-2) accompanying this report. All conserved vegetation on site should be preserved at all times using the mitigation measures indicated below.

The impacted vegetation will be of two types:

4.1.1 Existing vegetation to be removed

The development of the property will require the removal of some of the existing vegetation:

- A total of 21 individual trees will be directly impacted by the development of the project and will be removed because they are located within areas of proposed buildings, asphalt drive aisles or parking areas;
- One (1) planting bed is located within one of the proposed asphalt drive aisle;
- Two (2) shrub beds will be removed due to grading activities and one (1) shrub will be removed due to the installation of a new water pipe connecting to Rob Roy Avenue;
- Three (3) trees are dead;
- Three (3) trees are in poor conditions; and
- Four (4) individual stumps and one (1) area with a number of stumps and trunks (a stand of trees was cut in July 2012 but all stumps and trunks still remain on site) located at the front of the lot along the eastern property line are to be removed from site.

Special precaution to adjacent vegetation to remain should be taken when removing any trees.

4.1.2 Trees to be retained but affected by construction

Impact on the conserved portions of vegetation can be due to construction of asphalt drive aisles or parking areas, grade change, changes to drainage patterns, and effects of impervious surfaces and new buildings. A total of ten (10) trees and one (1) planting bed are located adjacent to the limit of work and will be affected by the construction. Special mitigation measures will be required when working around these trees.

As indicated in section 3.2 *Environmental Value of the Trees and Their Ecological Function*, two (2) Butternut trees (*Juglans cinerea*) were found on the property near the existing walkway connecting to Rob Roy Avenue. Butternut trees are considered to be a tree species at risk and categorized as Endangered Provincially and Nationally. The original Site Plan submitted to the City of Ottawa in August 2012 was identifying the removal of the two (2) existing Butternut trees and a Butternut Plan has been prepared and submitted to the Ministry of Natural Resources of Ontario (MNR) based on that plan. On September 6, 2012, an approval letter from the MNR was received to permit work affecting the two (2) existing butternut trees. The letter from the MNR specifies that “seven (7) pure butternut seedlings (...) from the Ferguson Forest Centre” will be required to compensate for the development of the site. The revised Site Plan does no longer require the removal of the trees but a new water pipe will be installed within ten (10) metres from the trees. Because the proposed development will be located within 25 metres from the Butternut trees the conditions specified in the letter issued by the MNR still apply and seven (7) new seedlings should be planted on site. In addition the letter specifies the butternut seedlings should be available by May 2013 or planting should “be delayed until (...) Fall 2013”. The Butternut Planting Plan also identifies the size of the new trees to be planted, the location of certified suppliers and the monitoring process to be followed. The contractor is responsible to comply with the **Butternut Planting Plan KV-P-011-12** issued by the MNR which can be found in **Appendix B** of this report.

4.2 Tree Protection Measures

Trees can be damaged in a number of ways during construction. The most common injury is to the crown or trunk. These injuries are visible and permanent and in some cases can be fatal to the tree. The roots are susceptible to physical injury through the cutting of the roots, soil compaction and/or smothering of the roots. The roots of a tree are located in the top 150 to 250 millimetres of soil and can very easily be inadvertently damaged. A vehicle parking under the root zone of a tree can compact the soil reducing the roots ability to absorb nutrients and uptake water. A change in grade of more than 150 millimetres over the roots will reduce its health and vigour. At any time no root system, trunk or branches of any tree should be damaged.

Within the critical root zone (CRZ) of trees located within construction limits there must be:

- No disturbance or alteration of the existing grade of any kind without approval;
- No addition of fill, excavating, or scraping to change the grade;
- No signs, notices or posters to be attached to any trees;
- No storage of construction materials or equipment;
- No storage of surplus soil, construction waste, or debris over the root systems of the protected trees;
- No disposal (dumping or flushing) of contaminants or liquids; and,
- No movement of vehicles (personal or business), equipment or pedestrians.

Before construction, fencing should be erected at the critical root zone (CRZ) of trees located in the construction area to ensure that this protection is achieved. Tree protection barriers shall be installed

according to information on the Proposed Development and Conserved Vegetation Plan (TC-2). Fencing shall be maintained erect and in good repair at all times during construction operations, and shall be removed upon completion when agreed by City staff. Temporary removal of fencing will not be considered without approval.

At any time during construction, root systems should not be damaged. In the event that a tree has roots that will be impacted by construction work, the Contractor shall only tunnel or bore when digging within the CRZ. The roots should only be cut by hand with a sharp spade or knife at the limit of disturbance prior to any construction activities. This will ensure that the roots are not disturbed more than necessary. Any root pruning requires the service of a Certified Arborist or Qualified Tree Worker under the supervision of a Certified Arborist. Any roots that are exposed must be covered with native topsoil immediately, to ensure that the roots do not dry out or have any further damage occur to them. All remedial works must be conducted by a certified care professional to ensure proper care is administered in order to enable the continued health of the trees.

When working near vegetation the Contractor shall ensure that exhaust fumes from all equipment are NOT directed towards any tree's canopy.

4.3 Tree Planting Recommendations

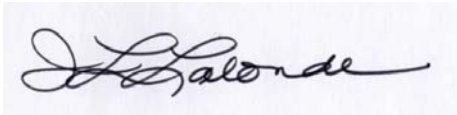
Tree planting recommendations for 2720 Richmond Road should implement the heritage character of the existing building and front entrance located on Richmond Road. Because a large number of the existing White Spruce (*Picea glauca*) will be removed due to the construction of a new drive aisle and parking area, east of the existing building, a significant number of this specie should be proposed on the Landscape Plan. In general, the number of proposed trees for the development of this project should compensate for the vegetation loss on site and should propose a mix of deciduous and coniferous trees, shrubs and perennials. Where possible the use of native, non-invasive tree species should be preferred. Examples of species adequate for this site are maples, butternuts, and spruces.

5.0 CONCLUSION

There are several trees that are in good condition and should be protected during construction on the site. Photos of each tree should be taken prior to construction, when the trees are in full leaf, as a record of its condition. This will provide a record of the existing condition that can be used if the tree is damaged or is showing signs of decline to determine if the condition is a result of construction activities.

Should you have any questions regarding the information presented within this package, please contact the undersigned.

Sincerely,



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Appendix A – Tree Survey

Appendix B – Butternut Planting Plan (KV-P-011-12)

**Appendix C – Current Vegetation Plan (TC-1)
Proposed Development and Conserved Vegetation Plan (TC-2)**